

## Abstract

2-Mercaptobenzothiazole is obtained from a melt of the raw product  
5 prepared by the reaction of aniline, carbon disulphide and sulphur by pressure  
synthesis in a reactor, where the melt contains 2-mercaptobenzothiazole,  
unreacted raw materials, intermediate products and pitches, so that after reaching  
a stationary state of the reaction medium it includes the following steps:

a) crystallization of the 2-mercaptobenzothiazole raw product from an  
10 aniline solution,

b) dividing the liquid phase ( $F_K$ ) from crystallization from step a) in three  
parts,

c) removing one part of the liquid phase ( $F_{K1}$ ) from crystallization from step  
a) out of the process,

15 d) returning the second part of the liquid phase ( $F_{K2}$ ) from crystallization  
from step a) into the reactor for preparation of the raw product and supplementing  
it with sulphur and carbon disulphide with respect to aniline,

e) final purification of the crystallized 2-mercaptobenzothiazole from step a)  
in the aniline liquid phase and separation of pure 2-mercaptobenzothiazole,

20 f) using the third part of the liquid phase ( $F_{K3}$ ) from crystallization from step  
a), supplemented with the liquid phase ( $F_R$ ) from final purification from step e) and  
possibly with aniline for crystallization of a further batch of the 2-  
mercaptobenzothiazole raw product,

g) using the liquid phase ( $F_R$ ) from final purification from step f), together  
25 with a part of the liquid phase ( $F_{K3}$ ) from step e), possibly with aniline, for  
crystallization of the 2-mercaptobenzothiazole raw product,

wherein the steps a) to g) are repeated.